

# Webinar Invite

Join us on March 25, 2021, 8:30 am EDT (UTC-4)

## Introducing New Plant Systems Design (PSD) Code

The nuclear sector is facing two major challenges. The first is to reduce cost of decommissioning old and building new nuclear power plants. In the UK, the Nuclear Sector Deal issued by the UK Government has called for 20% reduction in decommissioning costs and 30% reduction in the new build cost by 2030. The second challenge is to increase safety. The safety requirements have been toughened by the IAEA's Design Extension Conditions that require plants to withstand multiple hazards and extreme hazards. The challenge is to reduce cost whilst increasing safety and that calls for a different design approach. The nuclear industry is responding to this challenge of reducing cost without compromising safety by taking part in the development of new Plant Systems Design (PSD) code that will change the way design and construction is done. This presentation will explain the new initiative that is being taken by committee of international experts under the aegis of ASME to develop the PSD code which is a technology neutral standard that provides a framework, including requirements and guidance, for design organisations. In traditional nuclear industry approach the design process goes through concept, preliminary design, detail design, construction, commissioning, and operation. The emphasis is mostly on component design not on system design and the whole design process is sequential. The PSD standard aims to bring in three main changes: (a) integrate process hazard analysis in the early stages of design; (b) incorporate and integrate existing systems engineering design processes, practices and tools with traditional architect engineering design processes, practices and tools; and (c) to integrate risk informed probabilistic design methodologies with traditional deterministic design. Main features and advantages of systems-based approach to integrate design and safety in the PSD code will be described. In brief, this presentation will show how the nuclear plants need to be designed in future to meet the ever-increasing cost and safety challenges.

Free webcast!



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Who should attend:

policymakers, managers, regulators, students, general public



Professor Nawal Prinja has 40 years of academic and industrial experience in the nuclear sector. He is the Technology Director of Jacobs (Clean Energy) and holds a position of Honorary Professor at four British universities. Currently he is working with WNA on Harmonisation of Nuclear Codes. He has been on IAEA missions to China, South Africa, UAE, Spain and Poland. He was appointed as an advisor to the UK Government to help formulate their long-term R&D strategy for nuclear industry and continues to advise as a member of the Fusion Advisory Board of UKRI and Nuclear Propulsion Science and Technology Advisory Group of Ministry of Defence. He participates in a number of international committees notably the ASME code committee for developing new Plant Systems Design code and represents the UK at the Senior Industry Advisory Panel of the Generation IV International Forum.

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19 May 2021

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24 June 2021

In Service Inspection and Repair Developments for SFRs and Extension to other Gen4 Systems, Dr. Francois Baque, CEA, France